

جامعة صنعاء
كلية الطب والعلوم الصحية
دفعه 37 طب بشري



اللجنة العلمية للدفعه 37_B طب بشري
SCIENTIFIC COMMITTEE OF THE BATCH B_37 HUMAN MEDICINE

DERMATOLOGY

<https://t.me/dermatology37B>

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✍️ **النقص فينا باقي، والكمال بالمشاركة والتعاون.**
في حال وجود أي خطأ أو تعديل، يرجى ارساله إلى بوت اللجنة العلمية:-

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Parasitic infection

Dr :Niveen Almaisary

Additional Notes:

- **Primary skin lesion**

1. **Flat:**

- Macule <1cm
- Patch just color >1 cm

2. **Raised**

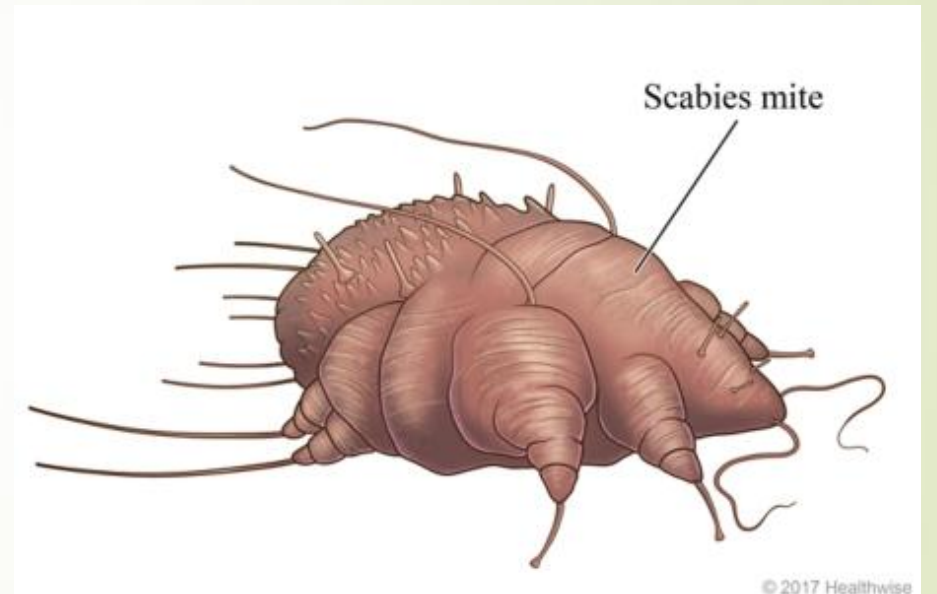
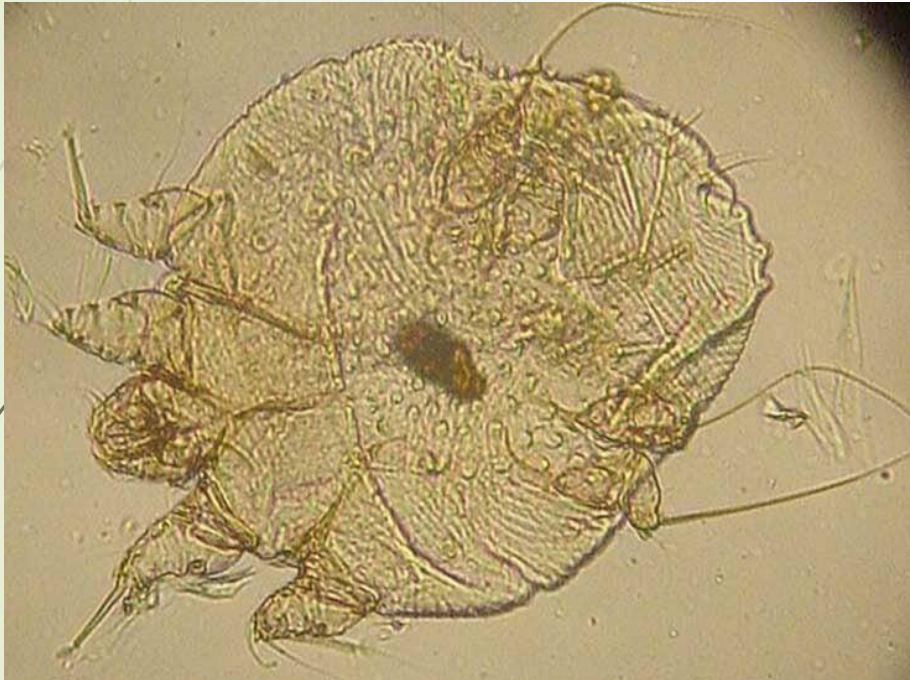
- Papule <1cm + pus papule
- Nodules 1-2cm
- Plaque >2cm ex psoriasis
- vesicle –clear fluid ex. Burn
- Primary specific lesion- dermal edema it disappears within 24 hour
- Wheal in- urticaria
- Crust dry exudates may be :
 - Blood
 - Pus
 - Serum

Scabies

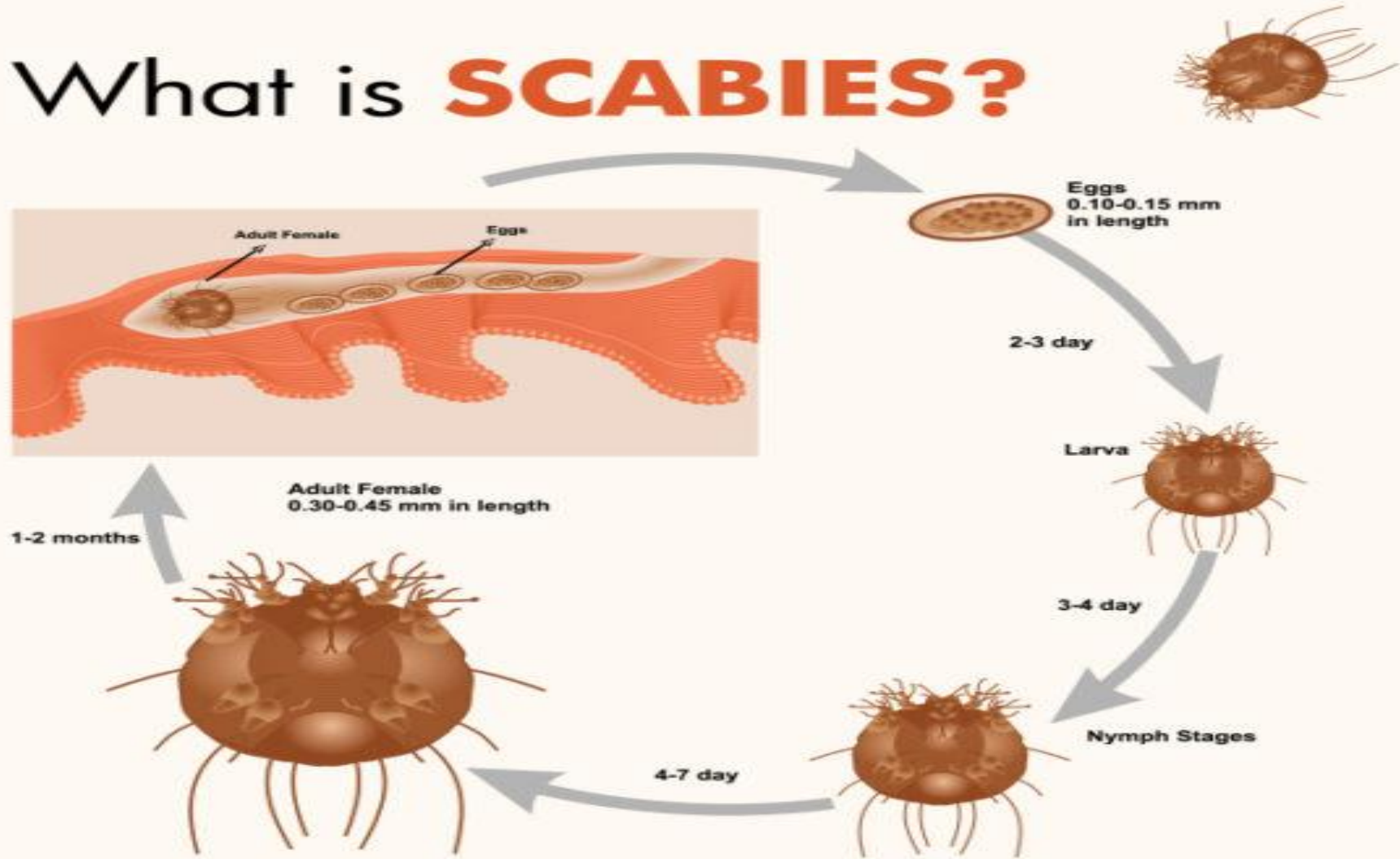
- ❑ A very common infectious disease caused by a fertilized female mite called *sarcoptes scabiei*
- ❑ It associated with severe itching
- ***Usually transmitted :***
 - ❑ Direct by close physical contact or indirect : by using clothes or bed of the patient
 - ❑ Also contact with infected animals
 - ❑ Away from the host scabies mites survive for 24 – 36hr

Note:

- Scabies is common in college students
- scabies is considered an (ectoparasitic) that live on the outer human skin and cannot enter the human skin
- The parasite lives 24-36 hour outside the body
- Most skin disease come with itching ,so we must differentiate between each disease



What is **SCABIES?**





Scabies,cont

- ❑ Can occur in any age or and in both sexes
- ❑ Itching sever especially at night 3-4 wks after infection occur

Typical locations of lesion :

- ❑ Finger webs, the flexor, surface of the wrists, the elbows, the axilla, the buttocks and genitalia and breasts of the women
- ❑ The face is often spared
- ❑ The typical lesions of scabies are **burrows**

Note:

- Itching is a result of the immunes reaction to the parasite
- The parasite like thin skin remote skin and hides
- When the patient come we must look for places where the disease may be in order to facilitate the diagnosis.





Scabies, cont

- ❑ Scabies in infants & young children show more extensive distribution of burrows, vesicularpustular lesions
- ❑ Extensive eczematization is often present
- ❑ Multiple crusted nodules on the trunk and limbs

➤ Complication

- ❑ Secondary bacterial infection
- ❑ Eczematous changes
- ❑ Acrophobia

Note:

- Secondary bacterial infection- because of the intense itching that lead to the entry of bacteria on the skin (Sstaph. aureus)

Clinical variant :

- ☐ Scabies incognito
- ☐ Scabies in clean
- ☐ Nodular scabies
- ☐ Infant scabies
- ☐ Norwegian scabies

DDx :

- papular urticaria ,
- pediculosis corporis
- Eczema

Note:

- Scabies incognito –the features of the disease change so it can be misdiagnosed and treated in correctly
- scabies in clean –the patient come with strong immunity and has mild symptoms
- Nodular scabies –large bumps





Additional Notes

- Noruigan scabies-the patient comes with low immunity not like the usual distribution and there is no itching because there is no equilibrium due to weak immunity (due to HIV, Leukemia, renal failure).
- **Differential Diagnosis:**
 - Papular urticarial- it come from insects
 - Pediculosis corpories—baby lice





Diagnosis :

- ☐ Mainly clinical
- ☐ Itching mainly at night
- ☐ Presence of burrows
- ☐ Distribution of the lesions
- ☐ Contact cases within family
- ☐ Demonstration of parasite under microscope

Management :

➤ Prophylactic measures :

- ❑ early diagnosis & treatment
- ❑ Treatment of other family members, disinfection and treatment of infected animals.

➤ Medical treatment :

- ❑ treatment of 2nd infection & 2nd eczema
- ❑ Systemic anti histamine for itching.
- ❑ Scabicides (topical) :
 - benzyl benzoate 25%
 - Crotamiton 10%
 - Gama benzenc hexacloride 1%

Note:

- ttt 2nd infection – topical antibiotic
- 2nd eczema –steroid anti-histamine- to treat itching.
- Chlorphenamine- is the first treatment for pregnant woman and children because it is safe
- Gamma benzene hexachloride - is old and is not used because it causes skin pigmentation

Scabies. Cont,

- Permethrin cream 2.5% for child & 5% for adult
- ❑ Oral ivermectin for severe & resistance cases.
- ❑ Intralesional Steroid injection for post scabietic nodules

Note:

- Permethrin- it is the best treatment
- **How is it used?**
 - The patient places the cream on his whole body, even under his nails, but not on the face. It's placed at night and then in the morning patient washes his body off and repeats the process for a whole week even if the itching stops.
 - Patient is advised to get rid of his previous clothes or place them all in a bag for a few days until the parasite dies. This is because his main food supply is the human skin. So pt. can keep 3 outfits to change between and constantly wash.



Causes of post scabietic pruritus

- ☐ Irritation of skin by topical preparation
- ☐ Post scabietic nodules, pruritus
- ☐ acarophobia

lice

- Lice are insects that live on human hair and clothing.
- Lice are wingless and have 6 legs on which are attached strong claws, which they use to grasp on tightly to hair shafts or clothing fibres.
- Head lice are the most common infestation in humans
- their eggs are called nits
- The medical term for an infection or infestation with lice is called “pediculosis”

There are 3 types of lice that infest humans.

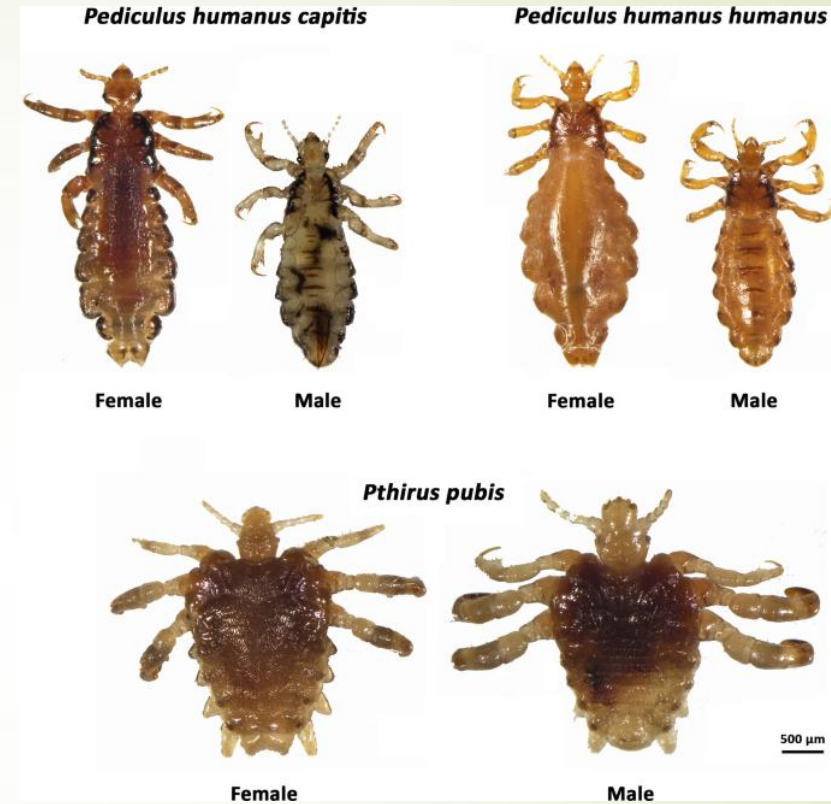
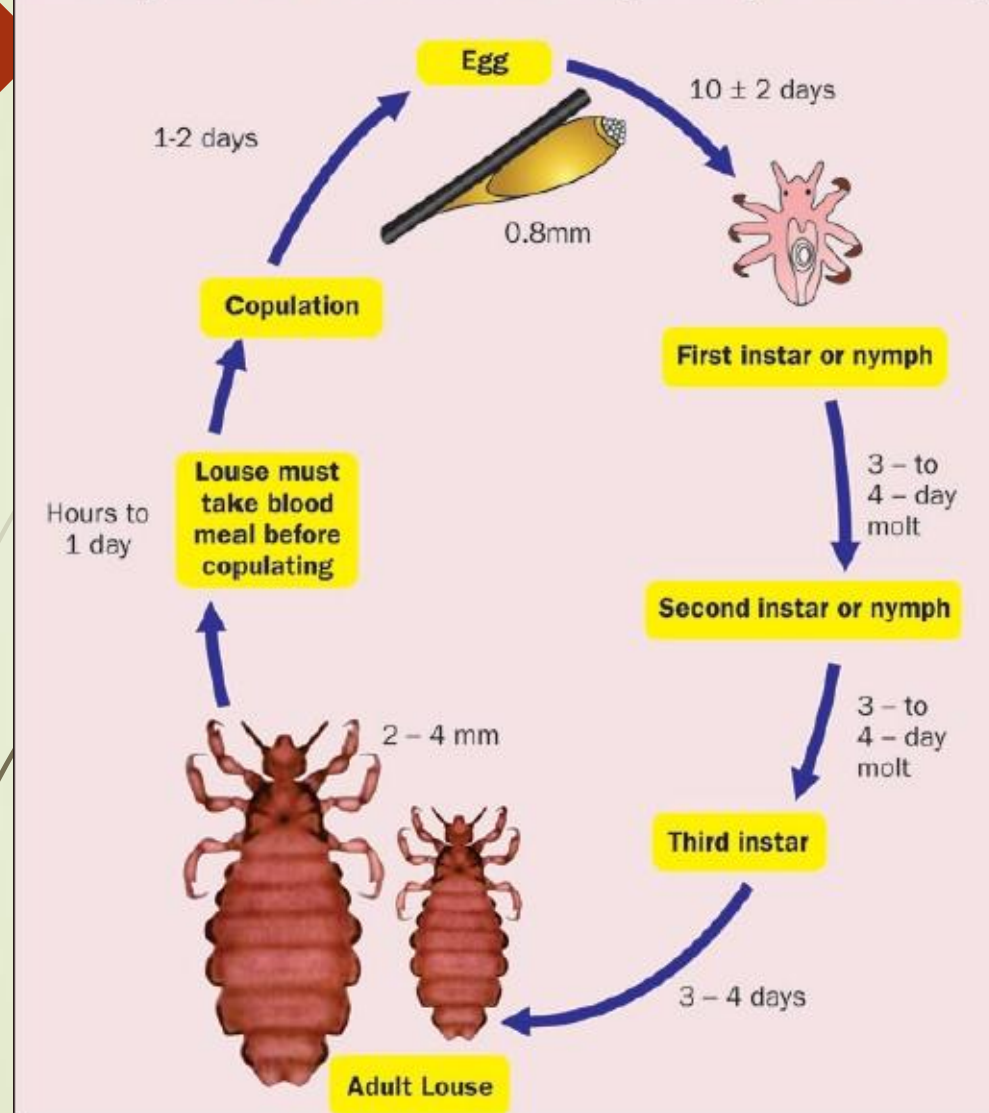
- 1. Pediculus humanus var. capitis: The head louse.
- 2. Pediculus humanus var. humanus
- Phthirus pubis: The pubic louse.

Note:

- Lice secretes substance called cement
- We can diagnosis lice by nits—which stick to hair by cement
- Phthirus pubis--found more in Europe (Sexually active individuals)



Life cycle of *Pediculus Capitis* (Head lice)



Note:

- Everyday the lice give one egg
- Itching in hair is the common symptom
- Itching in hair first—we search for lice behind the ear or the occipital region

Pediculosis capitis

- The usual organism is **Pediculus humanus capitis**,
- very prevalent especially in school children and crowded areas in most societies.
- Occurs most commonly in children 3–11 years, girls > boys
- The majority of infestations are acquired by direct head to head contact
- The louse reaches maturity in approximately 10 days.
- Head lice feed on human blood and **itching** from lice bites is a common symptom of this condition
- (normally intensifies 3-4 weeks after the initial infestation).
- Scalp pruritus is characteristic,

Pediculosis capitis



- some may be asymptomatic
- Secondary bacterial infection may occur from scratching
- Pruritic papular lesions may occur on the nape of the neck, lymphadenopathy
- concomitant head louse infection must always be considered in cases of scalp impetigo
- The empty egg cases occur in greatest density on the parietal and occipital regions



Management

- Live head lice can be treated by wet combing with fine-toothed comb;
- chemical treatment if ineffective, e.g malathion, permethrin
- Treat all affected contacts and repeat after 7–10 days

Causes of therapeutic failure for head lice include
misunderstanding of instructions, non-adherence, resistance, failure to retreat after 7–10 days and reinfestation

Note:

- pediculus corporis appear in immune compromised patient or neglect people
- It does not appear in the body just in clothes. We just see the site of biting in the body when it's feeding on blood



Clothing/body lice (Syn. Pediculus corporis)

- associated with poor socioeconomic conditions.
- The natural habitat is the clothing of its host, and lice only visit the skin to feed. Eggs are cemented to clothing fibers
- Clinical features
- Itching is the main complaint.
- The body is often covered in excoriations
- and/or secondary bacterial infection.
- Post-inflammatory pigmentation occurs in longstanding disease
- Lice and eggs should be sought in the clothing





Management

- Bed linens and clothes should be decontaminated by hot washing.
- Infested materials sealed in plastic bags may be used safely after 3 days.
- Infested furniture, mattresses and box springs should be discarded or fumigated to destroy lice and nits



Crab lice (Syn. Phthiriasis pubis)

- known as Phtirus pubis.
- contracted by close contact and are easily transmitted sexually.
- The pubic hair is most common site
- but lice can spread to other hairy parts of the body including axilla, beard, chest hair and thigh hair.
- Eyelashes can also be affected



Clinical features

- Itching, mainly in the evening and at night, is the main symptom.
- Inspection of affected areas will reveal lice on hairs close to the skin surface,
- and louse eggs attached to the hair shafts
- When pubic crab lice are identified other hairy areas of the body should be examined

Note:

- Why is the itching at night –due to decreased hormone “cortisol”.





Management

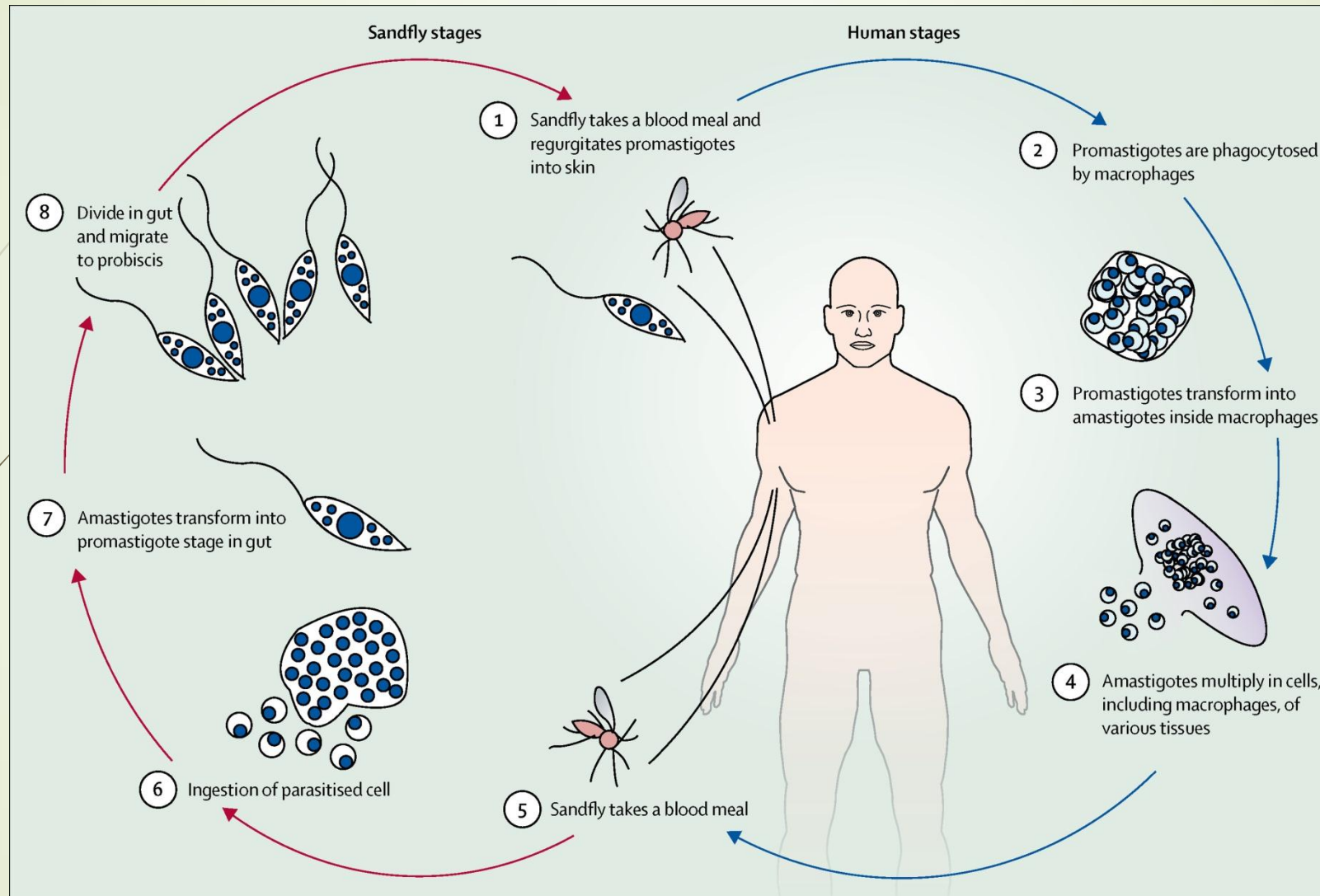
- All hairy areas of the body should be treated at the same time.
- Pubic lice are treated with the same insecticidal creams or lotions as pediculosis capitis.
- with a second application after 7–10 days.
- Eyelash infestations should be treated with permethrin 5% cream (washed off after 10 min) or only with petrolatum (applied twice a day for 8–10 days),
- followed by mechanical removal of the nits.
- Screen for associated sexually transmitted disease

Leishmaniasis



- is a disease caused by protozoan parasites that belong to the genus *Leishmania*
- and is transmitted by the bite of certain species of sand fly.
- Most forms of the disease are transmissible only from animals (zoonosis), but some can be spread between humans.
- Human infection is caused by about 21 of 30 species that infect mammals.
- One of the most common forms of the disease is cutaneous leishmaniasis that occurs most commonly ,over 90%
 - **Note:** *Leishmania* causes skin scarring.

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- **Life Cycle** The organism is transmitted by the bite of several species of blood-feeding sand flies (*Phlebotomus*)
 - which carry the **promastigote** in the anterior gut and pharynx.
 - The parasites gain access to mononuclear phagocytes where they transform into **amastigotes** and divide until the infected cell ruptures.
 - The released organisms infect other cells.
 - The sandfly acquires the organisms during the blood meal; the amastigotes transform into flagellate promastigotes and multiply in the gut until the anterior gut and pharynx are packed. Dogs and rodents are common reservoirs



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- .. **Visceral leishmaniasis** is a severe form in which the parasites have migrated to the vital organs.
 - The most important species of Leishmania is *L. donovani* causes visceral leishmaniasis (Kala-azar, black disease, dum dum fever)
 - . Leishmaniasis is divided into 4 main clinical forms and is caused by parasitic protozoa of the genus *Leishmania*

Note:

Visceral Leishmaniasis migrate to the vital organs (spleen, liver, etc.)

- **Types of Leishmaniasis**
 - Cutaneous Leishmaniasis
 - Mucocutaneous Leishmaniasis
 - Visceral Leishmaniasis
 - Diffuse Cutaneous Leishmaniasis

Cutaneous leishmaniasis:

- Cutaneous leishmaniasis is the most common form causing one or more ulcers on the skin.
 - start a small red papule up to 2 cm in diameter
 - Over several weeks, papules become darker and form ulcers with raised edges and central crater.
 - Ulcers can be moist and exude pus or dry with a crusted scab.
 - on exposed areas of the skin, especially the face and extremities.
 - Lesions may occur immediately after the bite or after weeks or months before causing any ulcers
- **Note:**
 - Leishmania destroys the layer of skin and is deep not superficial that's why it causes a scar





Mucocutaneous leishmaniasis:

- Lesions appearing 1-3 months after being bitten.
- Ulcers may only occur around the mucous membranes of the nose and mouth or may also involve skin lesions
- without treatment, the entire nasal mucosa and palates become deformed with ulceration and erosion of the nasal septum, lips and palate
- Mucosal lesions often are painful and become the sites of infection, sometimes leading to sepsis.





Diffuse cutaneous leishmaniasis

- Disseminated and chronic skin lesions resembling lepromatous leprosy.
 - Initial skin lesion spreads locally ,and from which the disease disseminate to other parts of the skin, often involving large area .
 - Lesion are nodules that don't ulcerate .
 - The disease progresses slowly and become chronic and difficult to treat.
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Visceral leishmaniasis:

- affects internal organs including the spleen, liver and lymph nodes.
- It is also known as “**Kala azar**”; because of the characteristic darkening (pigmentation) of the skin in patients with the disease.
- Symptoms include bouts of fever, weakness, diarrhea, swollen glands.
- Hepatosplenomegaly is common.
- The disease may take different forms ranging from asymptomatic self-resolving disease to fulminant, life-threatening disease
 - **Note:**
 - Visceral leishmaniasis, is suspected to be malaria at the beginning due to the similarity of the disease, after smear test we find that it is leishmania

Transmission cycle of visceral leishmaniasis (VL)



• *Lutzomyia longipalpis* vector of *Leishmania infantum*

• Dogs are the sole reservoir

• Humans are incidental hosts

• Vector is abundant in animal sheds

LIVESTOCK

KALA-AZAR OR VISCERAL LEISHMANIASIS A DEADLY DISEASE



Enlarged Spleen

Enlarged Liver





Diagnosis:

- Leishmaniasis is diagnosed in the haematology laboratory by direct visualization of the **amastigotes** (Leishman-Donovan bodies).
- Buffy-coat preparations of peripheral blood or aspirates from marrow, spleen, lymph nodes or skin lesions should be spread on a slide to make a thin smear, and stained with Leishman's or Giemsa's stain (pH 7.2) for 20 minutes.
- Amastigotes are seen with monocytes or, less commonly in neutrophil in peripheral blood and in macrophages in aspirates



Treatment :

- Most cases of **cutaneous leishmaniasis** resolve spontaneously without treatment, but this can take months or even years. Ulcers often leave unsightly scars
- There are two common therapies containing antimony (known as pentavalent antimonials): meglumine antimoniate (Glucantime) and sodium stibogluconate (Pentostam).
- Liposomal amphotericin B is effective in treating **visceral leishmaniasis**
- Secondary infections should be treated with appropriate antimicrobial therapy.
- Other treatments sometimes used for leishmaniasis include: Azole antifungal drugs: itraconazole, fluconazole, ketoconazole, zinc sulfate, and cryotherapy

